

Actuary Report

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State Actuary

Presentation to
Washington State LEOFF Education Association

May 12, 2017

Office of the State Actuary
"Supporting financial security for generations."

Today's Presentation

- Funded status
- Public plan survey overview
- COLA update and historical experience
- 2017-19 PFC contribution rate adoption
- Other items of interest?
- Q&A

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LEOFF 1 Funded Status

| (Dollars in Millions) | LEOFF 1 at June 30, 2015* |
|--|---------------------------|
| a. Future value of fully projected benefits | \$10,633 |
| b. Present value of fully projected benefits | \$4,313 |
| c. Present value of accrued benefits | \$4,307 |
| d. Market value of assets | \$5,610 |
| e. Deferred asset gains/(losses) | \$207 |
| f. Actuarial value of assets (d – e) | \$5,404 |
| g. Unfunded liability (c – f) | (\$1,097) |
| h. Funded status (f ÷ c) | 125% |

Note: Totals may not agree due to rounding. Source: June 30, 2015, Actuarial Valuation Report.

*Accrued liabilities represent the present value of future benefits for current members earned at the valuation date assuming an expected rate of return on assets of 7.7% per year. Actuarial assets have been valued under the actuarial asset method (the "smoothing" method).

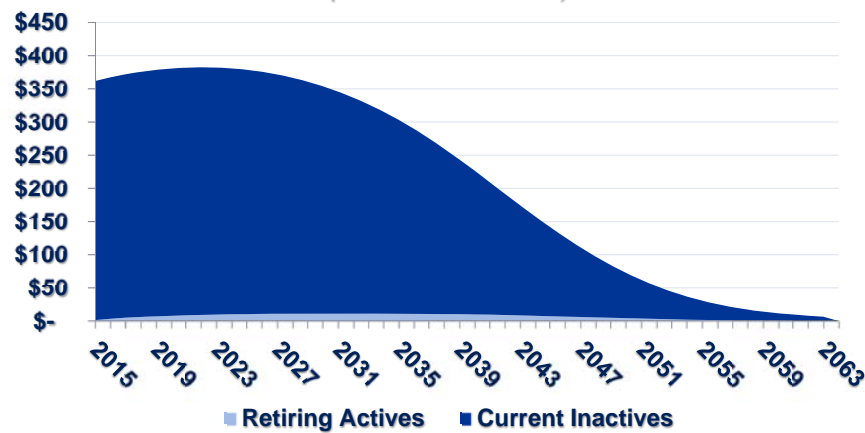
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Projected LEOFF 1 Benefit Payments (Future Value)

LEOFF 1 Projected Benefit Payments
(Dollars in Millions)



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Present Value Of Future Benefits By Source

| Present Value of Fully Projected Benefits | |
|---|----------------|
| (Dollars in Millions) | LEOFF 1 |
| Active Members | |
| Retirement | \$100 |
| Termination | 0 |
| Death | 1 |
| Disability | 0 |
| Return of Contributions on Termination | 0 |
| Return of Contributions on Death | 0 |
| Inactive Members | |
| Terminated | \$0 |
| Service Retired | 1,888 |
| Disability Retired | 1,729 |
| Survivors | 595 |
| Laws of 2016 | 0 |
| 2015 Total | \$4,313 |

Note: Totals may not agree due to rounding.

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LEOFF 1 Funded Status At 6.7% Interest Rate Assumption

| (Dollars in Millions) | LEOFF 1 at June 30, 2015* |
|---------------------------------|---------------------------|
| a. Accrued liability | \$4,716 |
| b. Actuarial value of assets | \$5,404 |
| c. Unfunded liability (a - b) | (\$688) |
| d. Funded status (b ÷ a) | 115% |

Note: Totals may not agree due to rounding. Source: OSA website, interactive reports.

*Accrued liabilities represent the present value of future benefits for current members earned at the valuation date assuming an expected rate of return on assets of 6.7% per year. All assets have been valued under the actuarial asset method (the "smoothing" method).

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LEOFF 1 Funded Status On A "Market Value" Basis

| (Dollars in Millions) | LEOFF 1 at June 30, 2015* |
|---------------------------------|---------------------------|
| a. Accrued liability | \$5,585 |
| b. Market value of assets | \$5,610 |
| c. Unfunded liability (a - b) | (\$25) |
| d. Funded status (b ÷ a) | 100% |

Note: Totals may not agree due to rounding. Source: OSA website, interactive reports.

*Accrued liabilities have been valued using an interest rate of 5% while assets at their market value. The 5% interest rate approximates the "risk free" rate of return on assets while maintaining consistency with the 3% inflation assumption used to project future benefit payments. This method was not used to determine contribution requirements.

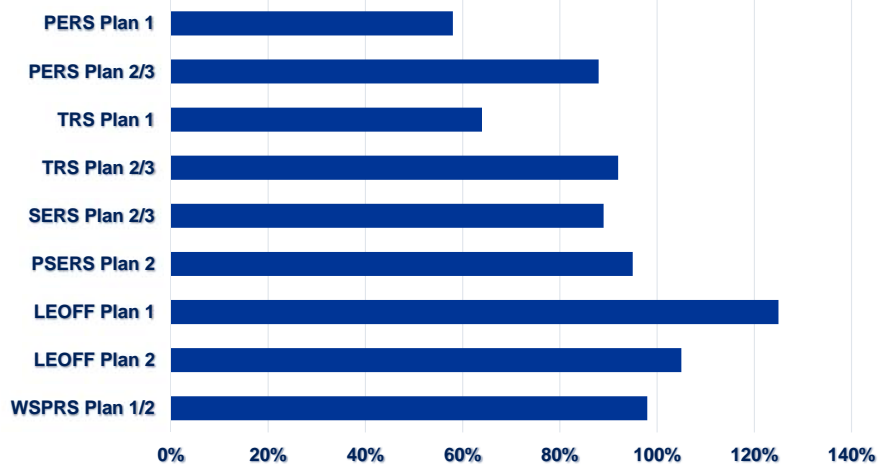
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All Systems Funded Status

Funded Status on an Actuarial Value Basis



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Summary Of Plan Participants

| LEOFF 1 at June 30, 2015 | | | | |
|-----------------------------------|--------|-------------|-----------------|--------------------------|
| | Number | Average Age | Average Service | Average Salary/Benefits* |
| Actives | 82 | 63.6 | 39.6 | \$106,683 |
| Annuitants | | | | |
| Service Retirees | 2,557 | 72.40 | 29.17 | \$58,417 |
| Retirees with Disabilities | 3,365 | 71.72 | 20.73 | \$42,724 |
| Survivors | 1,585 | 77.27 | 22.56 | \$42,874 |

*Annualized.

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Summary Of Plan Participants – Preliminary

| LEOFF 1 at June 30, 2016 | | | | |
|-----------------------------------|--------|-------------|-----------------|--------------------------|
| | Number | Average Age | Average Service | Average Salary/Benefits* |
| Actives | 62 | 64.5 | 40.4 | \$108,061 |
| Annuitants | | | | |
| Service Retirees | 2,512 | 73.10 | 29.33 | \$59,460 |
| Retirees with Disabilities | 3,240 | 72.46 | 20.74 | \$43,097 |
| Survivors | 1,626 | 77.60 | 22.61 | \$43,473 |

*Annualized.

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Questions On Funded Status?



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Public Plan Survey Data

- Survey covered individual funding levels of 124 plans at FY 2015
 - Includes 12.7 million active and 8.8 million annuitants
 - Membership and Assets of systems in Survey comprise 85% of state and local government systems
- Increase in number of annuitants; decline in active members
 - Ratio of actives to annuitants dropped to 1.44
- Systems in the Survey held assets of \$3.20 trillion
- Most plans underwent sharp investment losses from 2008-09 followed by some offsetting asset gains
- Funding level was 73.7%, unchanged from the prior year
- Aggregate actuarial value of assets grew by 2.9% from \$2.96 to \$3.05 trillion



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Public Plan Survey Data (Cont.)

- Liabilities grew from \$4.02 trillion to \$4.13 trillion, or 2.8%
 - Lower growth rate stems from low salary growth, declines in employment and pension reforms
- Salary growth is modest and has remained around 1% since mid-2009
 - Negative and declining wage growth from FY 09 to FY 12
 - Wage growth continues to increase since FY 13
 - Higher wage growth seen in FY 14 and continues in FY 15
- Median investment return assumption for plans is 8%, however since 2009, reductions have lowered it to 7.5%
 - Shorter-term returns have dropped below assumed investment returns due to sub-par returns over ten year period and drop offs of strong past returns
 - Longer-term past returns for plans remain above long-term return assumption

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Other LEOFF Retirement Systems



Colorado Fire and Police Statewide



DC Police and Fire



Nevada Police Officer and Firefighter



New Jersey Police and Fire



New York State and Local Police



Ohio Police and Fire

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Funded Status For Other LEOFF Retirement Systems

| Other LEOFF Retirement Systems | Funded Status |
|--|---------------|
| Colorado Fire and Police Statewide | 103.8% |
| DC Police and Fire | 107.6% |
| Nevada Police and Firefighter | 74.3% |
| New Jersey Police and Fire | 72.6% |
| New York State and Local Police and Fire | 93.1% |
| Ohio Police and Fire | 70.8% |



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Questions On Public Plan Survey Data?



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LEOFF 1 COLA

- Defined under RCW 41.26.240
- 2017 COLA based on annual change in CPI from 2015 to 2016
- COLAs payable as of April 1, 2017

| Retirement Dates | Adjustment |
|-----------------------|------------|
| 4/2/2016 – 3/31/2017 | 0.00% |
| 1/1/2016 – 4/1/2016 | 2.28% |
| 4/2/2015 – 12/31/2015 | 3.21% |
| Prior to 4/2/2015 | 2.28% |

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LEOFF 1 CPI Defined

- CPI-W = Urban Wage Earners and Clerical Workers (Current Series)
- Not seasonally adjusted
- Area = Seattle-Tacoma-Bremerton
- Base = Alternate (Base Period = 1967)
- All items
- bls.gov/cpi/home

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Historical Inflation Assumptions For LEOFF 1

| Valuation Years | Inflation Assumption |
|-----------------|--------------------------------------|
| 1974 - 1978 | 7% in 1975 grading to 3.50% in 1980 |
| 1979 - 1984 | 10% in 1980 grading to 5.00% in 1990 |
| 1985 - 1988 | 4.00% |
| 1989 - 1994 | 5.00% |
| 1995 - 1997 | 4.25% |
| 1998 - 2013 | 3.50% |
| 2013 - Present | 3.00% |

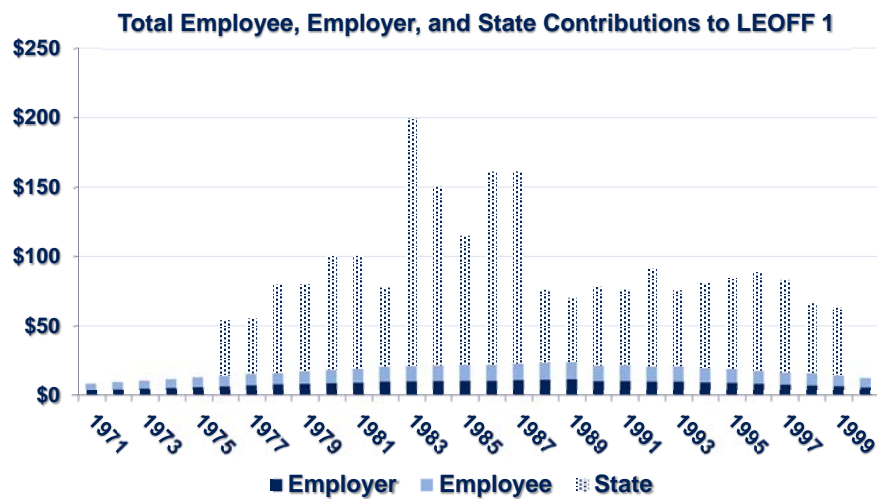
Note: Average annual inflation from 1974 to 2015 was 4.23%.

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Historical LEOFF 1 Funding



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Questions On COLA Or Historical Experience?



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2017-19 PFC Contribution Rate Adoption

- Last summer, the Pension Funding Council adopted contribution rates for 2017-19
 - Rates subject to revision by the Legislature
- Adopted rates include
 - Lowering assumed rate of return from 7.8 to 7.7%
 - Second of three planned steps to phase-in budget impacts from new mortality assumptions
- Adopted rates and phase-ins do not impact LEOFF 1 or LEOFF 2
- Member and employer rates on following two pages

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2017-19 PFC Adopted Contribution Rates - Member

| Member Contribution Rates | | | |
|---------------------------|---------|--------------------|-----------------------------------|
| System | Current | Adopted 2017-19 | Projected ¹ 2019-21 |
| PERS ² | 6.12% | 7.38% | 8.19% |
| TRS ² | 5.95% | 7.06% | 7.63% |
| SERS ² | 5.63% | 7.27% | 8.15% |
| PSERS | 6.59% | 6.73% | 6.98% |
| LEOFF 2 ³ | 8.41% | 8.75% | 8.75% |
| WSPRS | 6.84% | 7.34% | 7.34% |

¹Rates shown for 2019-21 are projections based on the results of the 2015 Actuarial Valuation. Actual results may vary.

²Plan 1 members' contribution rate is statutorily set at 6.0%. Members in Plan 3 do not make contributions to their defined benefit.

³No member or employer contributions are required for LEOFF Plan 1 when the plan is fully funded.

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2017-19 PFC Adopted Contribution Rates - Employer*

| Employer Contribution Rates | | | |
|-----------------------------|---------|--------------------|-----------------------------------|
| System | Current | Adopted 2017-19 | Projected ¹ 2019-21 |
| PERS | 11.00% | 12.52% | 13.05% |
| TRS | 12.95% | 15.02% | 15.09% |
| SERS | 11.40% | 13.30% | 12.97% |
| PSERS | 11.36% | 11.76% | 11.80% |
| LEOFF 2 ² | 8.41% | 8.75% | 8.75% |
| WSPRS | 8.16% | 12.81% | 18.32% |

¹Rates shown for 2019-21 are projections based on the results of the 2015 Actuarial Valuation. Actual results may vary.

²No member or employer contributions are required for LEOFF Plan 1 when the plan is fully funded.

*Excludes current administrative expense rate of 0.18%.

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Questions On PFC Rate Adoption



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Other Items Of Interest?

- Pension Funding Council will review economic assumptions this fall
 - Rate of investment return
 - Inflation
 - General salary increases
 - Any changes will impact contribution rates in 2019-21
- New accounting standards for LEOFF 1 medical benefits
 - Effective date of 2018 for employer reporting
 - Changes similar to changes made for pension standards

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Contacting The Office Of The State Actuary

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